background mortality may be high in these pts, particularly when followed long-term. Five-year (5 yr) cause of death, determined from autopsy and death certificate information, was analyzed in 2123 coronary angioplasty pts (mean age at baseline = 57.5) without acute MI in the NHLBI PTCA Registry. There were 200 deaths (9.4%) at 5 yr fu with 52.5% attributed to cardiac causes. Pts with low ejection fraction, prior bypass surgery, inoperable/high surgical risk, or multi-vessel disease had elevated 5 yr cardiac mortality. Pts with history of diabetes, congestive heart failure or severe concomitant disease had elevated rates of both cardiac and non-cardiac mortality. As length of fu increased, a crossover from cardiac to non-cardiac mortality was pronounced in older pts (table). In multivariate analysis, age > = 65 strongly predicted 5 yr risk of non-cardiac mortality (RR = 3.42, $p < 0.001$) but was not predictive of cardiac mortality. *Conclusions:* Both all-cause and cardiac-only mortality should be evaluated in coronary intervention studies involving older pts and long-term fu. Otherwise, conclusions related to treatment efficacy and prognostic factors may be inappropriate. Similarly, non-fatal cardiac outcomes (i.e. anginal status, repeat revascularization) seem particularly important in coronary intervention studies involving older pts and long-term fu.

Patient age at baseline	Cumulative Cardiac (C)/Non-Cardiac (NC) Mortality Rate Ratio at Follow-up Intervals					
	6 mon.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.
< 65 years	5.0	1.8	2.0	1.7	1.6	1.5
≥ 65 years	1.9	1.4	1.5	1.0	0.8	0.8
Cum. deaths C/NC	26/12	35/22	58/32	68/52	87/74	105/95

1031-62 Euroaspire: A European Survey of Secondary Prevention

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A European survey in nine countries (Czech Republic, Finland, France, Germany, Hungary, Italy, Netherlands, Slovenia and Spain) was undertaken to measure the potential for secondary prevention of coronary heart disease. Consecutive patients (≤ 70 years) from four diagnostic groups – CABG, PTCA, AMI and acute myocardial ischaemia without infarction – were identified from the centres and they were then invited for interview and examination at least six months after the acute procedure or event. 4863 medical records were reviewed and 3569 (73%) patients attended for interview. In all patients combined the prevalence (range between centres) of risk factors at interview was: 19% (13% Fin - 32% Ne) current cigarette smokers; 25% (19% Net – 33% Fra) had a body mass index ≥ 30 kg/m^2; 53% (48% Fra – 61% Cze) had hypertension; 44% (36% Spa – 58% Ita) had a total cholesterol of ≥ 5.5 mmol/1; 18% (14% Ger – 27% Hun) were diabetic; and 53% (33% Spa – 71% Fin) had a positive family history of CHD. Reported prophylactic drug therapy was as follows: 87% (72% Hun – 86% Ita) antiplatelets or anticoagulants; 54% (35% Spa – 78% Fin) beta blockers; 30% (17% Fin - 46% Hun) ACE inhibitors; 32% (22% Hun – 42% Fra) lipid lowering drugs; and 10% (7% Fin – 16% Spa) anti-diabetic drugs. There was considerable variation in the prevalence of risk factors and drug use between centres and also between diagnostic categories. In patients with coronary disease in Europe there is still considerable medical potential to reduce the risk of a further major ischaemic event.

1031-63 Air Force/Texas Coronary Atherosclerosis Prevention Study: Design and Baseline Characteristics

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The Air Force/Texas Coronary Atherosclerosis Prevention Study (AFCAPS/TexCAPS) is a randomized, double-blind placebo-controlled primary prevention trial designed to test the hypothesis that, in addition to a cholesterol lowering diet, treatment with lovastatin (LOV), to achieve a LDL goal of ≤ 110 mg/dl, reduces the combined incidence of fatal coronary heart disease (CHD), non-fatal MI and unstable angina.

Over three years, two sites randomized 6605 men and women, with a mean age of 58 (Range 45–73) to either LOV (20 mg/day) or placebo (PBO). To reach goal, blinded titration of LOV (and matched PBO) up to 40 mg daily is allowed. All participants will be followed until either 320 have had a primary endpoint or 5 years, whichever occurs last. Independently adjudicated endpoints will be used for an intention-to-treat analysis. The baseline characteristics of this study cohort are described below:

Characteristic	N	(%)	Lipid	mg/dl
Gender: M	5608	(85)	Mean Total-C ± S.D.	221 ± 21
F	997	(15)		
Race: White	5860	(89)	Mean HDL ± S.D.	37 ± 6
Hispanic	487	(7)		
Black	206	(3)	Mean LDL ± S.D.	150 ± 17
+ Family Hx CHD	1035	(16)	Median TG (Range)	158 (35–620)
Active Smoker	818	(12)		Ratio
Hypertension	1439	(22)	LDL/HDL	4.2 ± 0.8
Diabetes	153	(2)	Total-C/HDL	6.1 ± 1.1

Unique features of this trial are 1) the inclusion of unstable angina in the primary endpoint, 2) treatment to a LDL goal less than current NCEP guidelines and 3) a cohort that includes women, elderly and those with 'normal' cholesterol, mild-moderately elevated LDL and low HDL. The outcome may help to clarify the role, in primary prevention, of aggressive LDL reduction to delay or prevent acute coronary events in a relatively high risk population.

1032 Health Care Delivery: Lessons in Interventional Cardiology

Tuesday, March 18, 1997, 3:00 p.m.–5:00 p.m.
Anaheim Convention Center, Hall E
Presentation Hour: 4:00 p.m.–5:00 p.m.

1032-38 Regional Variation in Rates of Cardiac Catheterization in Stable Angina Patients Undergoing Myocardial Perfusion Imaging

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Substantial variability in the rates of cardiac catheterization (CATH) have been reported. In a recent report from Northern New England, noninvasive stress testing rates were highly correlated with rates of CATH. We compared rates of CATH ≤ 90 days in 7,706 stable angina patients referred for stress perfusion imaging (41% reversible defect, CATH rate = 17%). A multivariable risk-adjusted logistic regression analysis was performed. A clinical risk index was derived based upon a patient's age, sex, symptoms, and risk factors (35% female, mean age = 65 years). CATH rates in 4 hospitals were 29, 22, 12, and 12% for Westcoast, Northeast (NE), Central NE, and Midwest. Using Westcoast as a reference, CATH rates were 20–68% lower in other regions after controlling for clinical and nuclear variables (see table).

Region	n	Odds Ratios of Site vs. Westcoast	p value
Westcoast	2,168	–	–
Northeast	1,416	0.32 (0.26–0.4)	0.002
Central NE	466	0.8 (0.67–0.95)	< 0.001
Midwest	3,656	0.66 (0.51–0.86)	0.01

Clinical risk (5%), perfusion defect extent (86%), and hospital site (9%) contributed independent information in predicting CATH.

Conclusion: Considerable regional variability exists in the use of cardiac catheterization in stable angina patients that is unexplained by the underlying clinical or test risk markers. Other factors (e.g. access, referral patterns) influence catheterization in this population.

1032-69 Comparison And Validation Of Risk Adjustment Models For Observed And Predicted Mortality of PTCA

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Several risk adjustment models for PTCA mortality have been recently reported, but external validation on independent data sets and on high risk patient populations is lacking. Between 7/1/94 and 6/1/95, 1476 consecutive procedures were performed on a high risk patient population characterized by a high incidence of cardiogenic shock (3.3%) and acute myocardial infarction (14.3%). In hospital mortality was 3.4% (shock 48.9%, acute MI 12.5%, non MI 1.4%). Multivariable analysis identified emergency procedure, age, female gender, cardiogenic shock, pre-procedure administration of i.v. NTG, IABP requirement, LVEDP, and disease severity as independent predictors of in hospital mortality. Pre-procedure use of aspirin was protective. The area under the ROC curve for mortality was 0.92, and the Lemeshow-Hosmer